

GUARDIAN

Guardian Cable Range Mechanically Protected Multi-Core Cables

(Complies with BS 8436:2011)



Class 2 Stranded Copper / Low Smoke Zero Halogen Insulation /
Aluminum Screen / Low Smoke Zero Halogen Sheath

Application

Designed for fixed wiring applications in which the cable is to be concealed within a partition or a building void. The product is designed to withstand a short circuit fault current when accidentally penetrated by a nail or other sharp object.

The cable is manufactured with a Low Smoke Zero Halogen (LSZH) sheath, making it suitable for installations in public buildings where, in the event of fire, smoke and acid gas evolution would pose a hazard to public life and equipment.



Cable Description

Class 2 stranded copper conductor,
Class 2 stranded un-insulated circuit protection conductor (CPC),
Low smoke zero halogen cross linked polyethylene (XLPE) insulation,
Aluminum Screen,
Low smoke zero halogen (LSZH) outer sheath.

N.B. In the event of fire, the gases evolved from this cable are free from Halogen and the design is optimised to limit the quantity and cleanliness of the smoke evolved during this period. Although the acronym HFFR is applied to the sheath material, the terms LSOH, HFFR and HFFR are also applicable.

Insulation Colours

2 Core - Blue, Brown,

3 Core - Brown, Black, Grey

4 Core - Blue, Brown, Black, Grey

Sheath Colour

White, Black

Other colours available on request

Third party Accreditation



Cables are tested and approved by
BASEC (British Approvals Service for Cables)

Note: As BS 8436:2011 does not include a 6.00mm² conductor, BASEC approval does not apply to this product.

All other variants hold BASEC approval to BS 8436:2011.

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Disclaimer: Great effort is made to ensure the accuracy of the information presented, but errors may occur.

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Physical characteristics

No of Cores	Conductor Class	Nominal Cross-Sectional Area	Nominal Insulation	Nominal Sheath Thickness (mm)	Nominal Overall Dimensions	Maximum Conductor 20°C (ohms/km)	Approx. Weight of Cable (kg/km)
2	2	1.50	0.70	0.90	9.50	12.10	105
2	2	2.50	0.70	0.90	10.50	7.41	137
2	2	4.00	0.70	1.00	11.00	4.61	209
2	2	6.00	0.80	1.10	13.20	3.08	260
3	2	1.50	0.70	0.90	10.20	12.10	140
3	2	2.50	0.70	0.90	11.00	7.41	184
3	2	4.00	0.70	1.00	13.20	4.61	267
3	2	6.00	0.80	1.10	14.20	3.08	330
4	2	1.50	0.70	1.00	11.00	12.10	160
4	2	2.50	0.70	1.00	13.20	7.41	258
4	2	4.00	0.70	1.10	13.80	4.61	320
4	2	6.00	0.80	1.20	15.70	3.08	433

Mechanical characteristics

Characteristic	Unit	Value
Operating Temperature Range	°C	-10 / +90
Minimum Bend Radius	Diameter	6D

Electrical characteristics at 20°C

Characteristic	Unit	Value
Voltage Rating U ₀ /U	V	1.5mm ² to 4mm ² 300/500 6.00mm ² 600/1000
Current Rating Table	-	*4E2A (BS7671)

Notes *This product is capable of operating at 90°C in which case the higher current rating of Table 4E2A can be used providing it has been confirmed that the equipment connected is safely suitable for the higher operating temperature.

Current Ratings- Reference 4E2A – Ambient temperature at 30°C, conductor operating temperature 90°C as BS7671 Clipped direct - ref method C

Area	Two core cable, single phase AC or DC		Three or four core cable, three phase AC	
	Current rating amp	Volt drop (mV/amp/meter)	Current rating amp	Volt drop (mV/amp/meter)
1.5	24	31	22	27
2.5	33	19	30	16
4.0	45	12	40	10
6.0	58	7.9	52	6.8

Ambient temperature at 30°C, conductor operating temperature 90°C as BS7671 on cable tray - ref method E

Area	Two core cable, single phase AC or DC		Three or four core cable, three phase AC	
	Current rating amp	Volt drop (mV/amp/meter)	Current rating amp	Volt drop (mV/amp/meter)
1.5	26	31	23	27
2.5	36	19	32	16
4.0	49	12	42	10
6.0	63	7.9	54	6.8

Fire Performance

Test	Test Method	Value	Comment
Fume Emission	XR-F	No halogen, nitrogen, phosphorous or Sulphur containing com-pounds (trace elements ≤ 0.5% w/w)	Compliant
Single Cable Vertical Burn Test	BS EN 60332-1: 2004	Onset of char (from top support): > 50mm Extent of char (from top support): < 540mm	Compliant
Bunched Cable Vertical Burn Test	BS EN 50399	PHR / THR / FIGRA / SPR / TSP / d	Compliant
Acid Gas Emission	BS EN 50267-2-1: 1999	Less than 5mg/g	Compliant
Smoke Emission	BS EN 61034-2: 2005	Minimum light transmittance >60%	Compliant
CPR Euro Classification	BS EN 50575-201 4 Al-2016	Dca	

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